Summary of *L'Art et Son Avenir* (1924)
By G. Vantongerloo

Purpose
Vantongerloo presents a philosophical and scientific vision of art's future. He argues that true art should move beyond historical forms, naturalistic representation, and emotional subjectivity to become a **universal, abstract, and rational expression** of the unity of spirit and matter.

Key Themes
1 Evolution of Art
Art history reflects humanity's evolving attempt to balance **spirituality and materiality**.
Early art (Egyptian, Greek, Roman, etc.) was bound to local, historical, and religious contexts, unable to achieve universal unity.
Movements like Baroque, Expressionism, Futurism, and Cubism represent stages in this struggle but fail to reach pure abstraction.

2 True Plastic Art
Sculpture = balanced relations of **volumes** → unity of form.
Painting = balanced relations of **colors** → unity of color.
Music = balanced relations of **sounds** → unity of tone.
Pure art requires each medium to respect its domain (e.g., no volumetric forms in painting, no pictorial effects in sculpture).

3 Unity and Law
Art's purpose is to express the **universal unity** of spirit and matter.
This unity is achieved through:
Rational, mathematical composition.
Balance of relationships (e.g., of volumes, colors, lines).
Avoidance of imitation of nature or historical forms (fétichisme).
The artist's task is to **materialize the spirit** using abstract forms governed by universal laws.

4 Critique of Historical Art
Classical and traditional art subordinated spirit to material or vice versa, producing only local truths.
Real aesthetic beauty is abstract, not tied to natural forms or typologies (e.g., a forest or an old man may be beautiful in nature but not aesthetically so in pure art).

5 Science and Art
Art, like science, must obey laws (e.g., laws of color, line, volume).
The artist combines **speculation (philosophy)** and **empiricism (science)** to realize aesthetic unity.
The harmony of form (line, plane, volume) corresponds to harmony in the universe.

6 Mathematics and Composition

Vantongerloo uses numerical examples (like dividing a sculpture or painting as one divides 100) to illustrate how composition achieves balance.
Color harmony follows laws like those of the **spectrum** and **harmonics** (drawing parallels between sound and color).

---

7 Vision for Future Art

Art should abandon local subject matter (religion, mythology, history, portraits).
Instead, it should pursue **pure plastic expression**: abstract compositions that embody universal laws.
Such art is **universal, immutable**, and points humanity toward higher consciousness of the unity of all things.

In Short

Vantongerloo envisions a future where art is a rational, universal language of harmony, stripped of local or subjective elements, revealing the underlying unity of existence through pure abstraction in volume, color, and line.

Glossary of Key Terms in *L'Art et Son Avenir*

Art plastique / Plastic art

Art that gives form to space and matter—especially sculpture, painting, and architecture.
In Vantongerloo's theory: art that creates form through **abstract relations of volume, line, and color**, rather than imitating nature.

Pure plastic art

Art freed from representation, emotion, and local/historical content.
Focuses solely on the **universal, mathematical relationships** of form, color, and line to express harmony.

Volume

The fundamental element of sculpture.
The organization of space through solid form in balanced, abstract relationships.

Line

A primary structural element in both painting and sculpture.
For Vantongerloo, line is not descriptive (as in naturalistic drawing) but structural: it defines the relationships that compose the abstract harmony of the work.

Color

The essential element of painting, treated abstractly.
Not used to represent or imitate, but to balance and harmonize within a composition according to universal laws (e.g. analogous to the spectrum).

Unity

The ultimate aim of art: to manifest the **universal harmony** of spirit and matter.

Achieved through balanced relations of form, color, and line.
Unity in art corresponds to **cosmic unity**.

Law
Art, like science, must follow **universal, objective laws**.
These laws govern the relationships of form, volume, color, and sound, ensuring that art expresses universal harmony rather than personal emotion or local tradition.

Fétichisme
Vantongerloo's term for the clinging to specific subjects (e.g. mythological, religious, or historical themes) or to the imitation of nature.
Seen as a limitation that prevents art from attaining universality.

Local art
Art tied to particular places, times, traditions, or religions.
For Vantongerloo, local art expresses only partial truths, bound by specific cultural contexts rather than universal laws.

Abstraction
The elimination of representational content and subjectivity.
A process by which art reveals universal relationships through pure form, volume, and color.

Mathematics in art
The tool by which balance and harmony are achieved.
Compositional relationships (e.g. division of space, ratio of volumes, harmony of colors) are based on mathematical or rational principles.

Spectrum
The full range of colors as a natural law.
Art uses color relations that correspond to spectral harmonies, analogous to the harmonic relationships in music.

Spirit and matter
The two fundamental poles of existence.
Art's role is to express the unity of spirit and matter through formal harmony.

Empiricism and speculation
The two sides of the artist's work:
Empiricism: the scientific, law-following side of art.
Speculation: the philosophical and visionary side that conceives unity.

Universal art
Art that transcends individual, local, and historical particularities.
Expresses eternal principles through abstract harmony.

Vantongerloo's Closed Colour Circle

Here's what Vantongerloo is doing, in plain terms.

The idea

He wants to turn the **linear spectrum** (ordered by wavelength/frequency) into a **closed colour circle** so that **proportional (harmonic) relations** between colours become geometrically simple (equal arcs, oppositions, etc.). To do that he:

1. **Works in frequency, not wavelength.**
   He lists visible-light frequencies in the right ballpark (hundreds of terahertz) and labels them by hue bands (vert-bleu, bleu, indigo, violet). These appear as **harmonics** built from simple numerical steps/sums.

2. **Maps multiplicative relations to angles via logarithms.**
   He explicitly says a circle can be divided *either* into degrees *or* into **logarithms of numbers**; he cites a (then new) circular/logarithmic construction (Arnauld-Paineau) that "realises all calculation." In effect, **equal ratio steps** in frequency become **equal angular steps** on a circle. That's the mathematical trick that closes the line into a wheel.

3. **Uses the wheel to compose 'harmonies' of colour.**
   Once frequencies are placed on a **log circle**, simple numerical relations (harmonics/ratios) correspond to clean geometric relations (equal arcs, opposites, etc.). He then says the artist can build **balanced colour harmonies** by these laws—just as he argues for balanced **volume** relations in sculpture.

A compact way to picture his mapping

- Let f be a colour's frequency.
- Choose a reference f_0 (a red/anchor).
- Put each colour at angle $\theta = k\,\log\left(f/f_0\right)$ around a circle (base of the log just fixes the scale). Now **equal ratios** (e.g., "harmonic" steps) are **equal turns**; "complements" can be set by fixed angular separations. This is exactly the "divide the circle by logarithms" move he describes.

Where this sits in his broader argument

- He treats **colour** (painting) and **volume** (sculpture) analogously: both aim at **unité esthétique** through **mathematically balanced relations**. For colour, that means balancing **areas and values** of pure hues per the "law of colour"; for sculpture, balancing **volumes** per the "law of the cube."

Frequency (THz)	Angle (deg)	Colour
400	0	Red
410	15.885	Red
420	31.387	Red
430	46.524	Red
440	61.313	Red
450	75.77	Red
460	89.909	Red
470	103.744	Red
480	117.287	Red
490	130.552	Orange
500	143.548	Orange
510	156.287	Yellow
520	168.779	Yellow
530	181.032	Green
540	193.057	Green
550	204.861	Green
560	216.452	Green
570	227.838	Green
580	239.026	Green
590	250.023	Green
600	260.835	Green
610	271.468	Blue
620	281.929	Blue
630	292.222	Blue
640	302.353	Blue
650	312.326	Blue
660	322.148	Blue
670	331.822	Violet
680	341.352	Violet
690	350.744	Violet
700	360	Violet

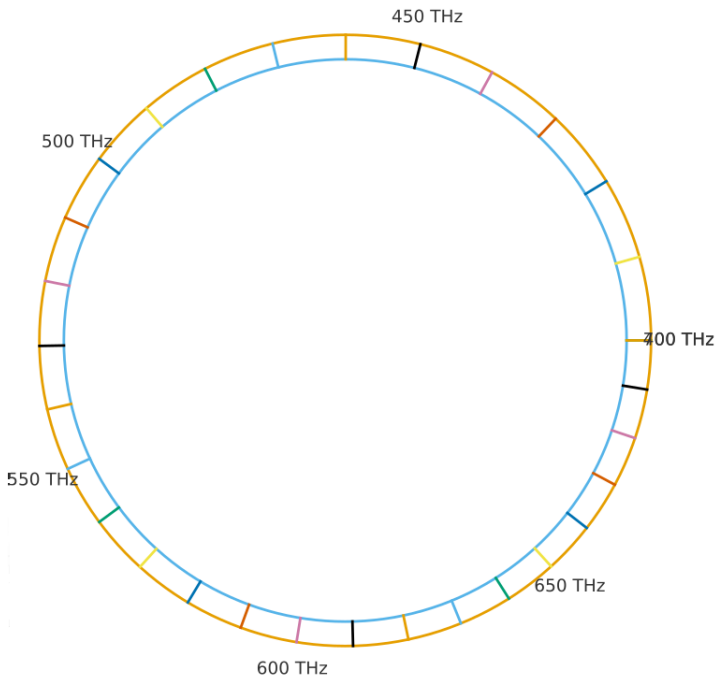
What this table represents

- Frequencies from **400–700 THz** = visible light (deep red to violet).
- Mapped using:

$$\theta = 360 \cdot \frac{\ln(f) - \ln(f_{\min})}{\ln(f_{\max}) - \ln(f_{\min})}$$

- This creates a **closed, cyclic colour wheel**, where **equal frequency ratios correspond to equal angular distances**, as Vantongerloo proposes.

Here is a **diagram of the full colour circle** based on Vantongerloo's principle — mapping the **linear spectrum (light frequencies)** onto a **circle using logarithmic proportions**.



✅ **What you now see in the diagram:**

- Frequencies from **400 THz (deep red)** to **700 THz (violet)**.
- Each point is placed at an angle:

$$\theta = 360 \cdot \log(\frac{f}{f_0}) \mod 360$$

- This reflects Vantongerloo's idea of dividing the circle according to **logarithmic values**, so that **equal frequency ratios** become **equal angular distances**.
- The result is a **closed colour system**, rather than an open-ended spectrum.

🎯 This is exactly what Vantongerloo describes in his text:

- The circle can be divided **not only by degrees**, but also by **logarithms of numbers**.
- That allows the **spectrum to become cyclical**, enabling relations like complementarity, harmony, or contrast to be defined mathematically.